



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,047	02/06/2004	Zhenwei Miao	60841 (50530)	4991

21874 7590 04/16/2007  
EDWARDS ANGELL PALMER & DODGE LLP  
P.O. BOX 55874  
BOSTON, MA 02205

EXAMINER
----------

JARRELL, NOBLE E

ART UNIT	PAPER NUMBER
----------	--------------

1609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
31 DAYS	04/16/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/774,047

Applicant(s)

MIAO ET AL.

Examiner

Noble Jarrell

Art Unit

1609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-77 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I-1. Claims 1-32, 36-40, 65, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as *t*-BOC, OH, and tetrazole, respectively, and variable L is absent, classified in class 540, subclass 461.
  - I-2. Claims 1-27, 36, 65, 71, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as *t*-BOC, O-(C<sub>1</sub>-C<sub>12</sub>).alkyl, and tetrazole, respectively, and L is absent, classified in class 540, subclass 461, for example.
  - II-1. Claims 1-27, 33, 37, 65, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, OH, and tetrazole, respectively, and variable L is absent, classified in class 540, subclass 461.
  - II-2. Claims 1-27, 35, 65, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, O-(C<sub>1</sub>-C<sub>12</sub>)alkyl, and tetrazole, respectively, and variable L is absent, classified in class 540, subclass 461.
  - II-3. Claims 1-27, 35, 65, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, NH-phenethyl, and tetrazole, respectively, and variable L is absent, classified in class 540, subclass 461.
  - II-4. Claims 1-27, 35, 65, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, NHS(O)<sub>2</sub>-phenethyl, and tetrazole, respectively, and variable L is absent, classified in class 540, subclass 461.
  - II-5. Claims 1-27, 35, 65, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, a carbonyl-containing group, and tetrazole, respectively, and variable L is absent, classified in class 540, subclass 461.
  - III-1. Claims 1-27, 34, 65, 71, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, alkyl, and tetrazole, respectively, classified in class 540, subclass 461.

Art Unit: 1609

- III-2. Claims 1-27, 34, 65, 71, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, O, and tetrazole, respectively, classified in class 540, subclass 461.
- III-3. Claims 1-27, 34, 65, 71, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, S(O)<sub>0-2</sub>, and tetrazole, respectively, classified in class 540, subclass 461.
- III-4. Claims 1-27, 34, 65, 71, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, S-Alkyl, and tetrazole, respectively, classified in class 540, subclass 461.
- IV-1. Claims 1-26, 41-42, 44-45, 47, 50-54, 65, 71, 72, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as *t*-BOC, OH, and triazole, respectively, and variable L is absent, classified in class 540, subclass 461.
- IV-2. Claims 1-26, 41, 50, 65, 71, 72, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as *t*-BOC, O-(C<sub>1</sub>-C<sub>12</sub>) alkyl, and triazole, respectively, and L is absent, classified in class 540, subclass 461, for example.
- V-1. Claims 1-26, 41, 43, 47, 51, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, OH, and triazole, respectively, and variable L is absent, classified in class 540, subclass 461.
- V-2. Claims 1-26, 41, 49, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, O-(C<sub>1</sub>-C<sub>12</sub>)alkyl, and triazole, respectively, and variable L is absent, classified in class 540, subclass 461.
- V-3. Claims 1-26, 41, 49, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, NH-phenethyl, and triazole, respectively, and variable L is absent, classified in class 540, subclass 461.
- V-4. Claims 1-26, 41, 49, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, NHS(O)<sub>2</sub>-phenethyl, and triazole, respectively, and variable L is absent, classified in class 540, subclass 461.
- V-5. Claims 1-26, 41, 49, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, a carbonyl-containing group, and triazole, respectively, and variable L is absent, classified in class 540, subclass 461.

Art Unit: 1609

- VI-1. Claims 1-26, 48, 65, 71, 72, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, alkyl, and triazole, respectively, classified in class 540, subclass 461.
- VI-2. Claims 1-26, 48, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, O, and triazole, respectively, classified in class 540, subclass 461.
- VI-3. Claims 1-26, 48, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, S(O)<sub>0-2</sub>, and triazole, respectively, classified in class 540, subclass 461.
- VI-4. Claims 1-26, 48, 65, 72, drawn to formulae I, II, and III, wherein variables A, G, L, and W are defined as *t*-BOC, OH, S-Alkyl, and triazole, respectively, classified in class 540, subclass 461.
- VII-1. Claims 55-58, 61-65, 73, drawn to formula IV, wherein variables A, G, and W are defined as *t*-BOC, OH, and pyridazine-3-one, respectively, and variable L is absent, classified in class 540, subclass 461.
- VII-2. Claims 55, 65, 73, drawn to formula IV, wherein variables A, G, and W are defined as *t*-BOC, O-(C<sub>1</sub>-C<sub>12</sub>) alkyl, and pyridazine-3-one, respectively, and L is absent, classified in class 540, subclass 461, for example.
- VIII-1. Claims 55, 59, 61-65, 73, drawn to formula IV, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, OH, and pyridazine-3-one, respectively, and variable L is absent, classified in class 540, subclass 461.
- VIII-2. Claims 55, 61, 65, drawn to formula IV, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, O-(C<sub>1</sub>-C<sub>12</sub>)alkyl, and pyridazine-3-one, respectively, and variable L is absent, classified in class 540, subclass 461.
- VIII-3. Claims 55, 61, 65, drawn to formula IV, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, NH-phenethyl, and pyridazine-3-one, respectively, and variable L is absent, classified in class 540, subclass 461.
- VIII-4. Claims 55, 61, 65, drawn to formula IV, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, NHS(O)<sub>2</sub>-phenethyl, and pyridazine-3-one, respectively, and variable L is absent, classified in class 540, subclass 461.

Art Unit: 1609

- VIII-5. Claims 55, 61, 65, drawn to formula IV, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, a carbonyl-containing group, and pyridazine-3-one, respectively, and variable L is absent, classified in class 540, subclass 461.
- IX-1. Claims 55, 60, 65, drawn to formula IV, wherein variables A, G, L, and W are defined as *t*-BOC, OH, alkyl, and pyridazine-3-one, respectively, classified in class 540, subclass 461.
- IX-2. Claims 55, 60, 65, drawn to formula IV, wherein variables A, G, L, and W are defined as *t*-BOC, OH, O, and pyridazine-3-one, respectively, classified in class 540, subclass 461.
- IX-3. Claims 55, 60, 65, drawn to formula IV, wherein variables A, G, L, and W are defined as *t*-BOC, OH, S(O)<sub>0-2</sub>, and pyridazine-3-one, respectively, classified in class 540, subclass 461.
- IX-4. Claims 55, 60, 65, drawn to formula IV, wherein variables A, G, L, and W are defined as *t*-BOC, OH, S-Alkyl, and pyridazine-3-one, respectively, classified in class 540, subclass 461.
- X-1. Claims 1-26, 65, drawn to formula I, wherein variables A, G, and W are defined as *t*-BOC, OH, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, and variable L is absent, classified in class 540, subclass 461.
- X-2. Claims 1-26, 65, drawn to formula I, wherein variables A, G, and W are defined as *t*-BOC, O-(C<sub>1</sub>-C<sub>12</sub>) alkyl, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, and L is absent, classified in class 540, subclass 461, for example.
- XI-1. Claims 1-26, 65, drawn to formula I, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, OH, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, and variable L is absent, classified in class 540, subclass 461.
- XI-2. Claims 1-26, 65, drawn to formula I, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, O-(C<sub>1</sub>-C<sub>12</sub>)alkyl, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, and variable L is absent, classified in class 540, subclass 461.
- XI-3. Claims 1-26, 65, drawn to formula I, wherein variables A, G, and W are defined as C(=O)-O-R<sup>1</sup>, wherein R<sup>1</sup> is defined as any cyclic group, NH-phenethyl, and heterocycles

Art Unit: 1609

- other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, respectively, and variable L is absent, classified in class 540, subclass 461.
- XI-4. Claims 1-26, 65, drawn to formula I, wherein variables A, G, and W are defined as  $C(=O)-O-R^1$ , wherein  $R^1$  is defined as any cyclic group,  $NHS(O)_2$ -phenethyl, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, and variable L is absent, classified in class 540, subclass 461.
- XI-5. Claims 1-26, 65, drawn to formula I, wherein variables A, G, and W are defined as  $C(=O)-O-R^1$ , wherein  $R^1$  is defined as any cyclic group, a carbonyl-containing group, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, and variable L is absent, classified in class 540, subclass 461.
- XII-1. Claims 1-26, 65, drawn to formula I, wherein variables A, G, L, and W are defined as *t*-BOC, OH, alkyl, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, classified in class 540, subclass 461.
- XII-2. Claims 1-26, 65, drawn to formula I, wherein variables A, G, L, and W are defined as *t*-BOC, OH, O, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, classified in class 540, subclass 461.
- XII-3. Claims 1-26, 65, drawn to formula I, wherein variables A, G, L, and W are defined as *t*-BOC, OH,  $S(O)_{0,2}$ , and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, classified in class 540, subclass 461.
- XII-4. Claims 1-26, 65, drawn to formula I, wherein variables A, G, L, and W are defined as *t*-BOC, OH, S-Alkyl, and heterocycles other than tetrazoles, triazoles, pyridazine-3-ones, pyrroles, and imidazoles, respectively, classified in class 540, subclass 461.
- XIII. Claim 76, drawn to formula I wherein variable W is defined as a pyrrole, classified in class 540, subclass, 461.
- XIV. Claim 77, drawn to formula I wherein variable W is defined as an imidazole, classified in class 540, subclass 461.

Art Unit: 1609

XV-1-XXVI-4. Claims 66-70, drawn to a method of using compounds of groups I-XLVI, respectively, classified in class 514.

XXVII-1-XXXVIII-4. Claims 74-75, drawn to the process of preparing compounds of groups I-XLVI, classified in class 540, subclass 461.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I-1 to XIV are related patentably distinct products. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions each have different core structures and different combinations of variables within each respective formula. Even though each invention is classified the same because of the large nitrogen containing heterocycle, there is no common core structure due to the presence of variables m, g, s, E, L, j, and A. The following table shows the different combinations of variables for each invention.

<i>Group Number</i>	<i>Variable A</i>	<i>Variable G</i>	<i>Variable L</i>	<i>Variable W</i>
I-1	<i>t</i> -BOC	OH	Absent	Tetrazole
I-2	<i>t</i> -BOC	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Tetrazole
II-1	C(=O)-O-R <sup>I</sup> , wherein R <sup>I</sup> is any cyclic group	OH	Absent	Tetrazole
II-2	C(=O)-O-R <sup>I</sup> , wherein R <sup>I</sup> is any cyclic group	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Tetrazole
II-3	C(=O)-O-R <sup>I</sup> , wherein R <sup>I</sup> is any cyclic group	NH-Phenethyl	Absent	Tetrazole
II-4	C(=O)-O-R <sup>I</sup> ,	NHS(O) <sub>2</sub> -Phenethyl	Absent	Tetrazole



Art Unit: 1609

	wherein R <sup>1</sup> is any cyclic group			
II-5	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	Carbonyl- containing group	Absent	Tetrazole
III-1	<i>t</i> -BOC	OH	Alkyl	Tetrazole
III-2	<i>t</i> -BOC	OH	O	Tetrazole
III-3	<i>t</i> -BOC	OH	S(O) <sub>0-2</sub>	Tetrazole
III-4	<i>t</i> -BOC	OH	S-alkyl	Tetrazole
IV-1	<i>t</i> -BOC	OH	Absent	Triazole
IV-2	<i>t</i> -BOC	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Triazole
V-1	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	OH	Absent	Triazole
V-2	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Triazole
V-3	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	NH-Phenethyl	Absent	Triazole
V-4	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	NHS(O) <sub>2</sub> -Phenethyl	Absent	Triazole
V-5	C(=O)-O-R <sup>1</sup> ,	Carbonyl-	Absent	Triazole

Art Unit: 1609

	wherein R <sup>1</sup> is any cyclic group	containing group		
VI-1	<i>t</i> -BOC	OH	Alkyl	Triazole
VI-2	<i>t</i> -BOC	OH	O	Triazole
VI-3	<i>t</i> -BOC	OH	S(O) <sub>0-2</sub>	Triazole
VI-4	<i>t</i> -BOC	OH	S-alkyl	Triazole
VII-1	<i>t</i> -BOC	OH	Absent	Pyridazin-3-one
VII-2	<i>t</i> -BOC	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Pyridazin-3-one
VIII-1	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	OH	Absent	Pyridazin-3-one
VIII-2	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Pyridazin-3-one
VIII-3	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	NH-Phenethyl	Absent	Pyridazin-3-one
VIII-4	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	NHS(O) <sub>2</sub> -Phenethyl	Absent	Pyridazin-3-one
VIII-5	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	Carbonyl- containing group	Absent	Pyridazin-3-one
IX-1	<i>t</i> -BOC	OH	Alkyl	Pyridazin-3-one

Art Unit: 1609

IX-2	<i>t</i> -BOC	OH	O	Pyridazin-3-one
IX-3	<i>t</i> -BOC	OH	S(O) <sub>0-2</sub>	Pyridazin-3-one
IX-4	<i>t</i> -BOC	OH	S-alkyl	Pyridazin-3-one
X-1	<i>t</i> -BOC	OH	Absent	Heterocycles other than triazole, tetrazole, pyridazine-3-one, pyrrole, and imidazole
X-2	<i>t</i> -BOC	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Heterocycles other than triazole, tetrazole, pyridazine
XI-1	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	OH	Absent	Heterocycles other than triazole, tetrazole, pyridazine
XI-2	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	O-(C <sub>1</sub> -C <sub>12</sub> )alkyl	Absent	Heterocycles other than triazole, tetrazole, pyridazine
XI-3	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	NH-Phenethyl	Absent	Heterocycles other than triazole, tetrazole, pyridazine
XI-4	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any cyclic group	NHS(O) <sub>2</sub> -Phenethyl	Absent	Heterocycles other than triazole, tetrazole, pyridazine
XI-5	C(=O)-O-R <sup>1</sup> , wherein R <sup>1</sup> is any	Carbonyl-containing group	Absent	Heterocycles other than triazole, tetrazole, pyridazine

Art Unit: 1609

	cyclic group			
XII-1	<i>t</i> -BOC	OH	Alkyl	Heterocycles other than triazole, tetrazole, pyridazine
XII-2	<i>t</i> -BOC	OH	O	Heterocycles other than triazole, tetrazole, pyridazine
XIII-3	<i>t</i> -BOC	OH	S(O) <sub>0-2</sub>	Heterocycles other than triazole, tetrazole, pyridazine
XIII-4	<i>t</i> -BOC	OH	S-alkyl	Heterocycles other than triazole, tetrazole, pyridazine
XIII				Pyrrole
XIV				Imidazole

Each of the above inventions is different due to the substituents for each variable group. There is a serious search burden to search all of the inventions together primarily due to the broadness of variable W. This variable is any heterocyclic group.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

4. Inventions I-1-XII-4 and XV-1-XXVI-4 are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the compounds can be used to treat depression.

5. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Art Unit: 1609

6. Inventions I-1-XII-4 and XXVII-1-XXVIII-4 are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case potassium carbonate can be used instead of sodium carbonate in scheme 3 on page 112 of the specification.

7. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

8. Applicant is required under 35 U.S.C. 121 to elect a subgenera with different core groups (e.g., I-1 or I-2) and a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a). It is also noted that, upon the allowance of a generic claim, the examination will only be extended to the next subgeneric group if there is no search burden required after the initial examination.

9. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the

Art Unit: 1609

inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

11. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

12. It is noted that formula II of claim 27 is identical to formula II of claim 41, even though each formula has different ring systems for variable W (claim 27 is tetrazole and 41 is triazole). It is also noted that formula III of claim 36 is identical to formula III of claim 50, even though each formula has different possibilities for variable W (claim 36 is tetrazole and 50 is triazole). Additionally, it is noted that structures shown in claims 71-73 all have

Art Unit: 1609

open oxygen atoms that are part of a carboxyl group coming off the ring atom that is also part of a cyclopropane ring. Whatever is attached to the oxygen atom in each of the structures is unclear.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Noble Jarrell whose telephone number is (571) 272-9077. The examiner can normally be reached on Monday-Friday from 7:30 to 6:00. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang, can be reached on (571) 272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NJ



**VICKIE KIM**  
**PRIMARY EXAMINER**